

TA-4300

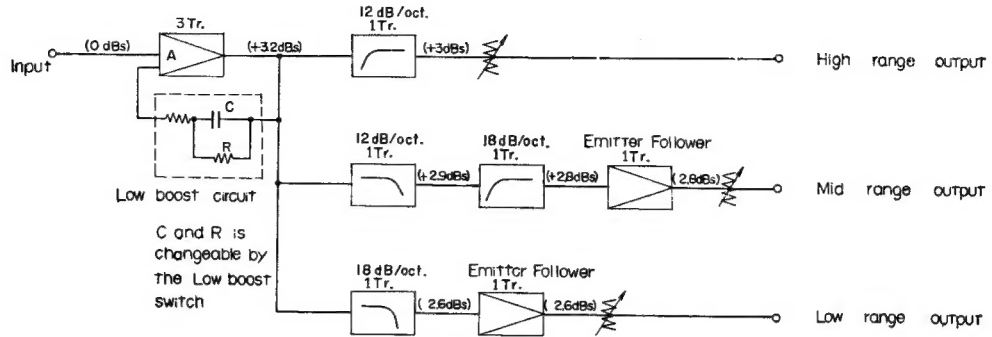


Specifications

- System:** NF-type Filter
- Gain:** +3 db (± 0.5 db)
- Crossover Frequencies:** Low 150, 250, 400, 600 Hz
High 3, 4, 5, 6.5 KHz
- Output Impedance:** Less than 5,000 ohms
- Distortion:** Less than 0.1% at 3 volts output
(Level control at Maximum) Less than 0.5% at 5 volts output
(for signals within the passband)
Less than 0.1% at 2.1 volts output
Less than 0.5% at 3.5 volts output
(at the crossover frequencies)
- S/N Ratio:** 80 dB (1 volt input, closed circuit)
- Transistor:** 2SC401 (16) 2SC318 (2) 2SC292 (1)
- Diode:** SD1Z (4)
- Maximum Input Level:** 3.5V (less than 0.5% distortion)
2.1V (less than 0.1% distortion)
- Power Consumption:** 3 Watts
- Power Requirements:** 100, 117, 220 or 240V AC 50/60 Hz
- Dimensions:** 295 (W) \times 145 (H) \times 163 (D) mm (11 $\frac{3}{8}$ " \times 5 $\frac{7}{8}$ " \times 6 $\frac{1}{2}$ ")
- Weight:** Approx. 4 kgs. (9 lbs.)

SONY®
SERVICE MANUAL

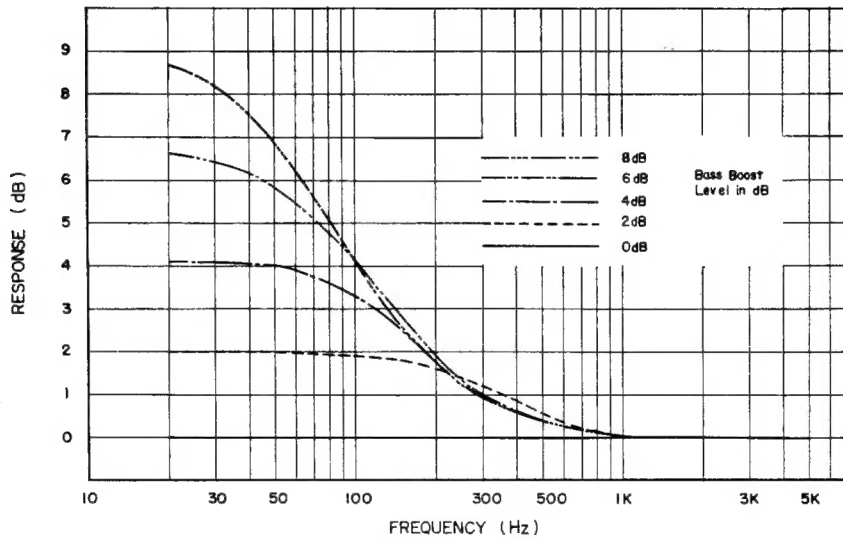
TA - 4300 BLOCK DIAGRAM



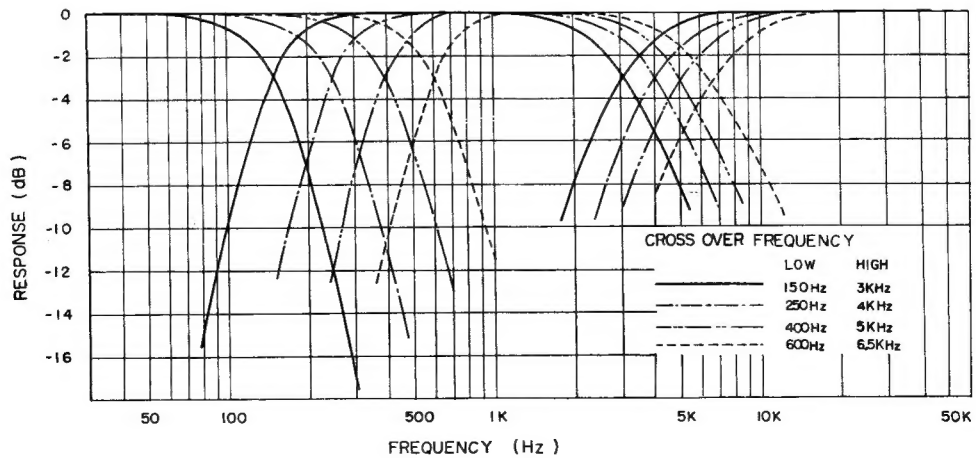
BASS BOOST RESPONSE

UNDER FOLLOWING CONDITION

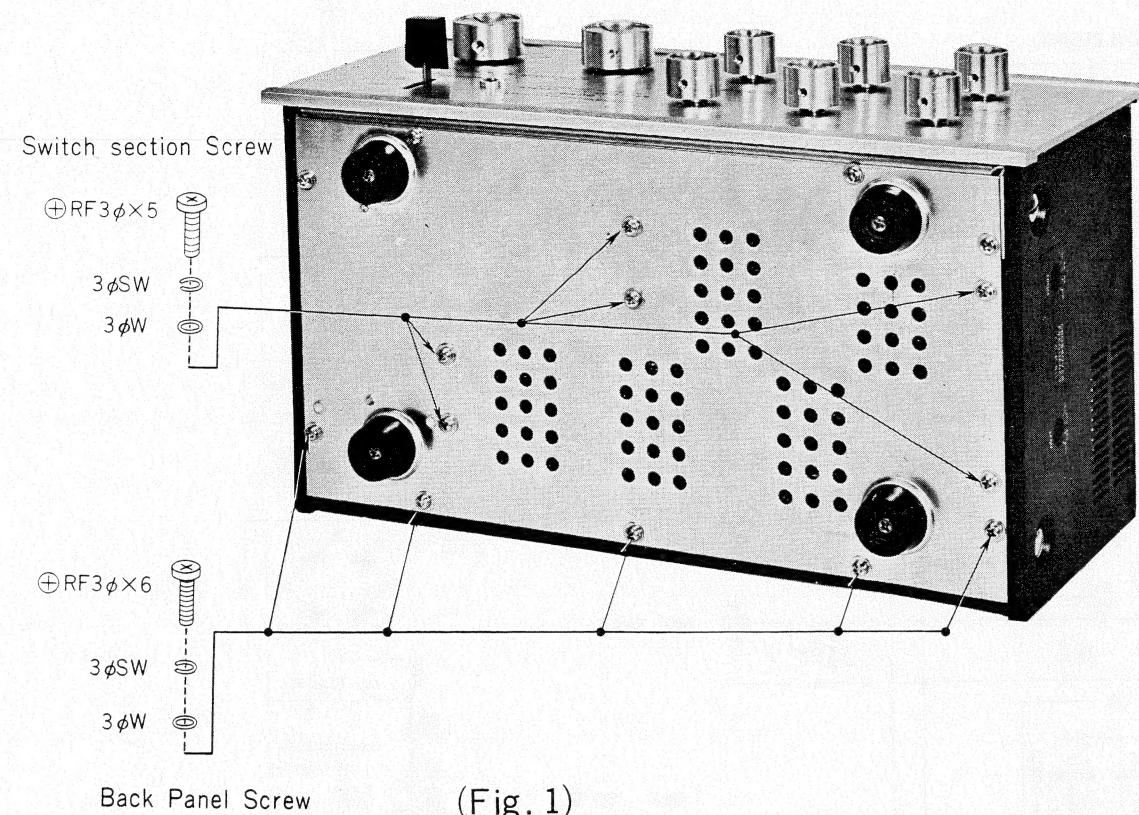
Turnover frequency : 150 Hz.
Output level : Constant
Input level : Vary



CROSSOVER FREQUENCY RESPONSE



DISASSEMBLY

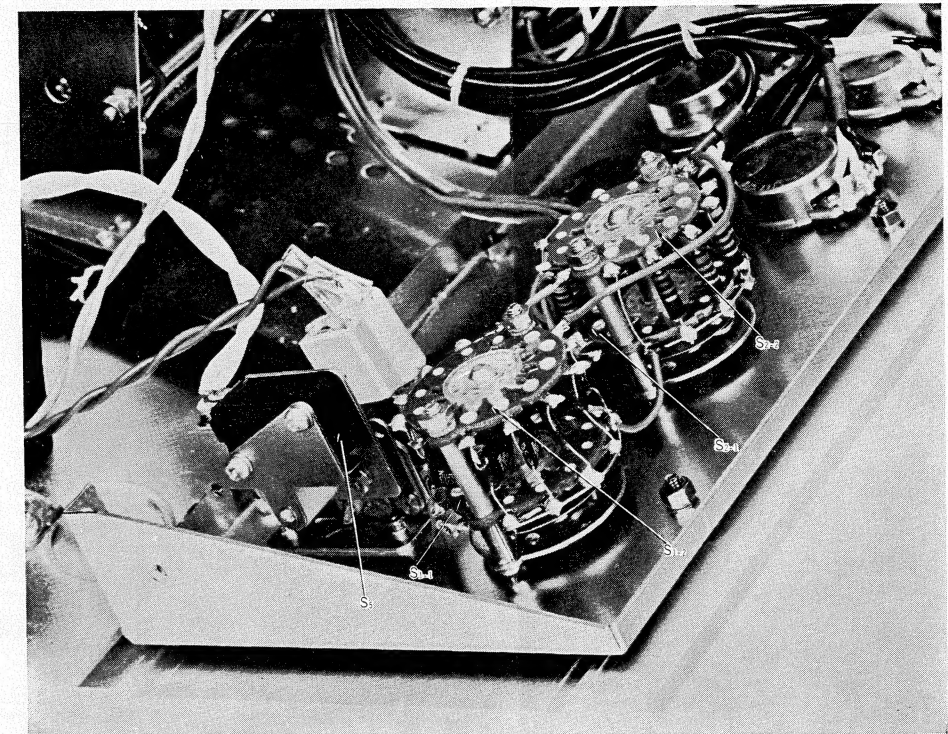


(Fig. 1)

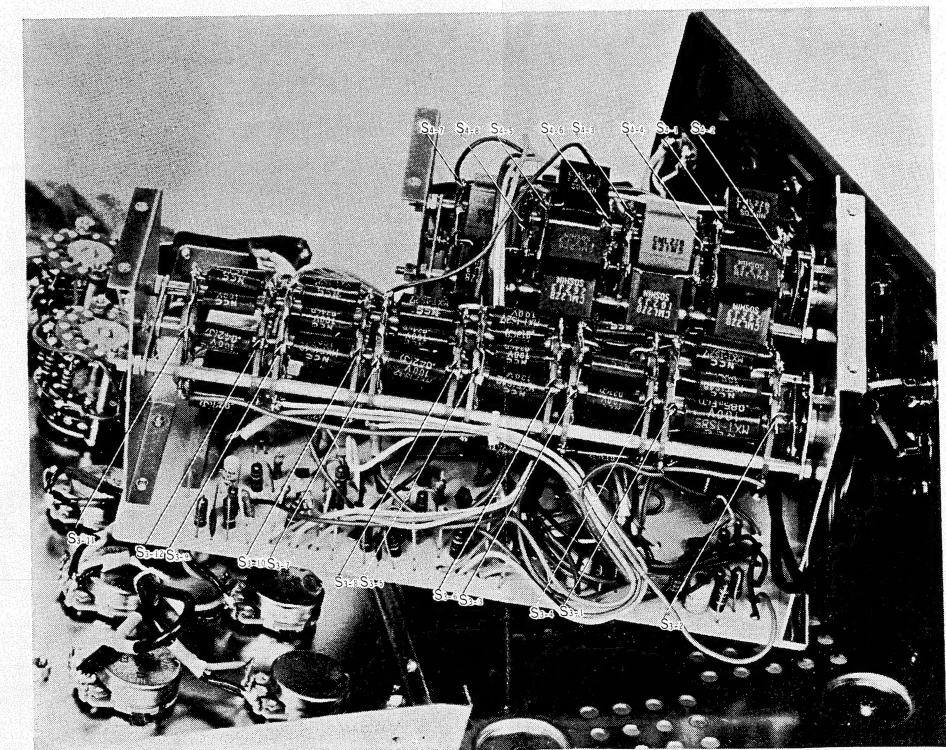
- Remove four machine screws from both sides of the chassis cover to take it off.
- Remove five screws from the bottom of chassis to release the back panel as shown in Fig. 1.
- Remove six screws from bottom of the chassis to remove switch section.

All service will be easily done after above procedure as shown in Fig(2), Fig(3)

Location of Subassembly



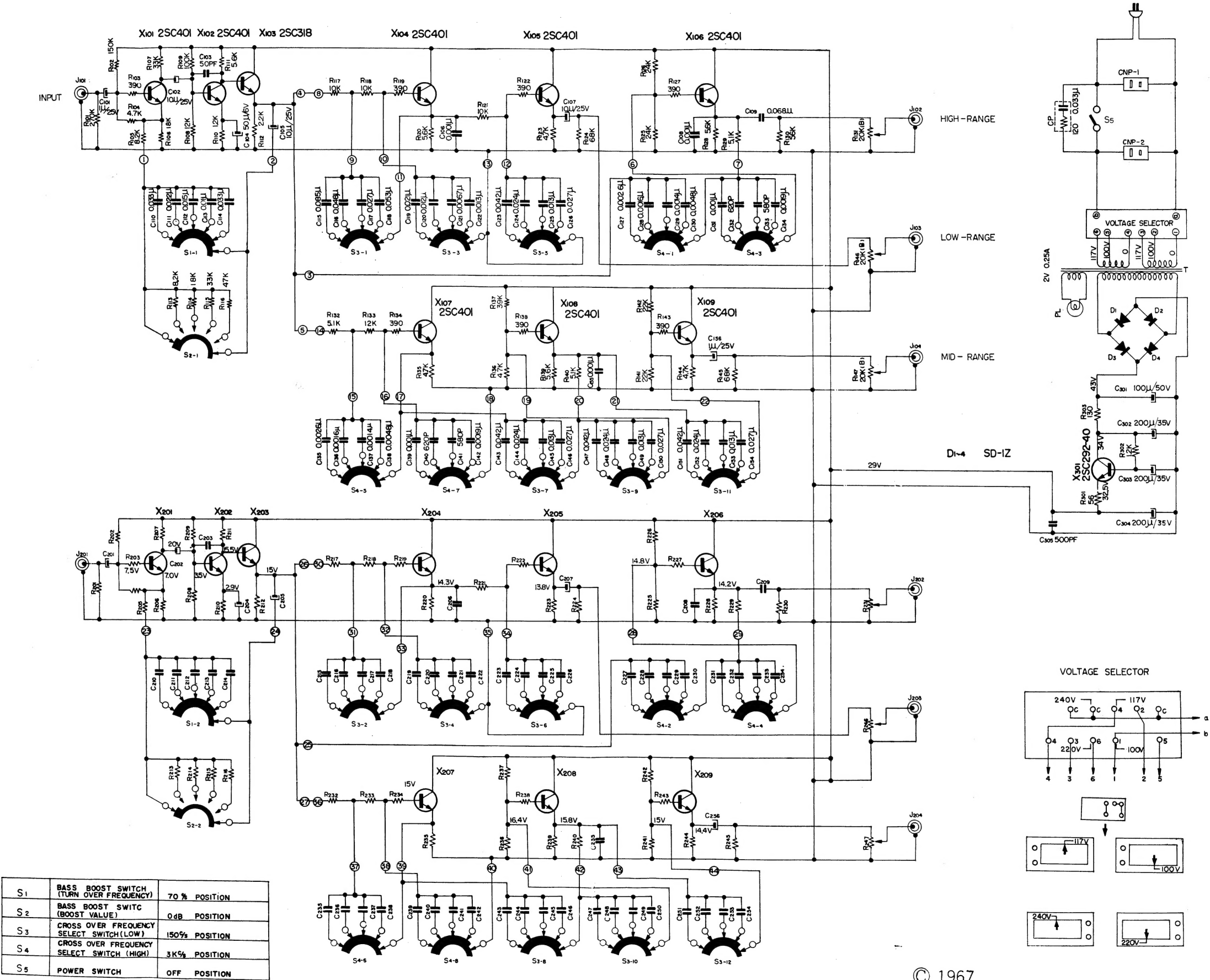
(Fig. 2)



(Fig. 3)

TA-4300

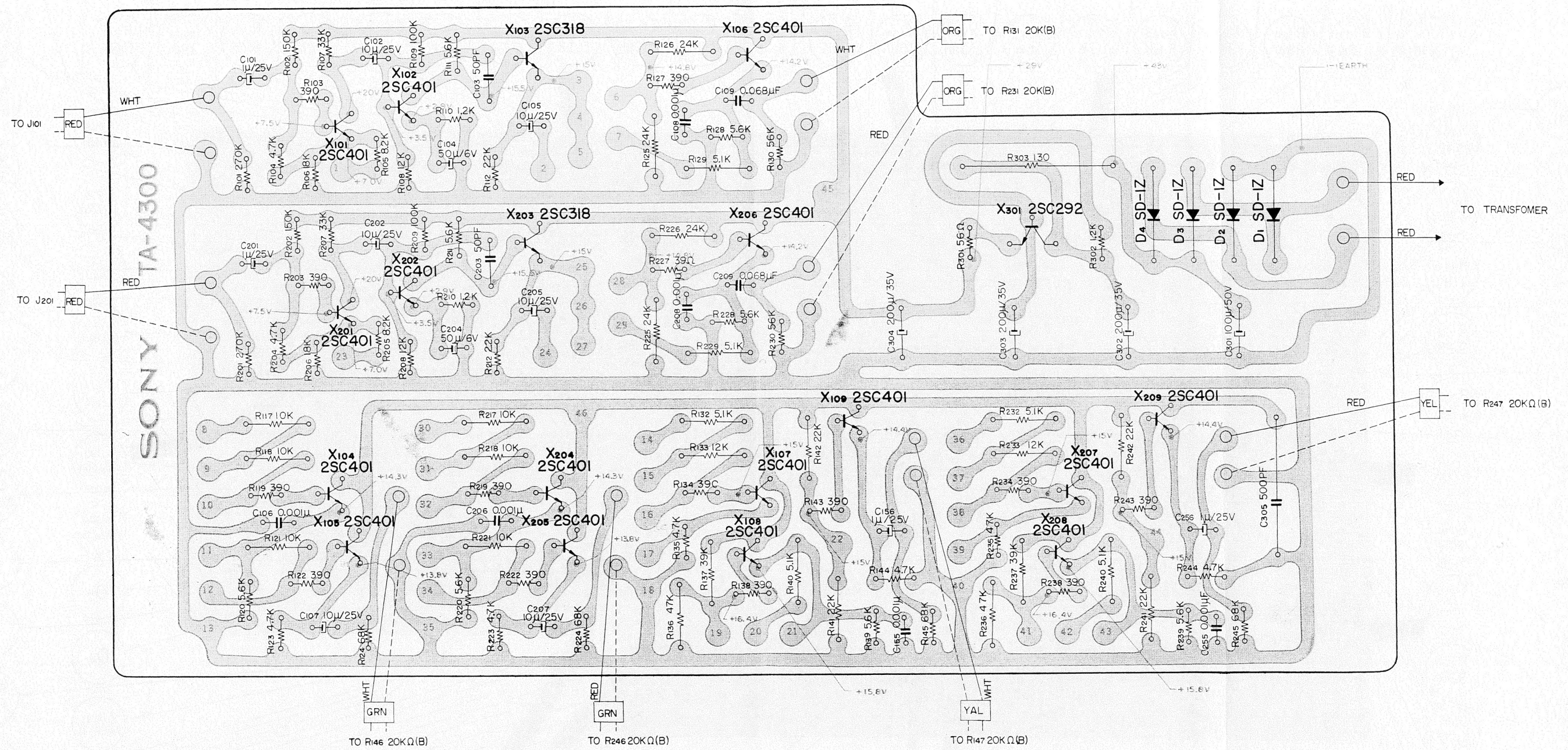
TA-4300 SCHEMATIC DIAGRAM



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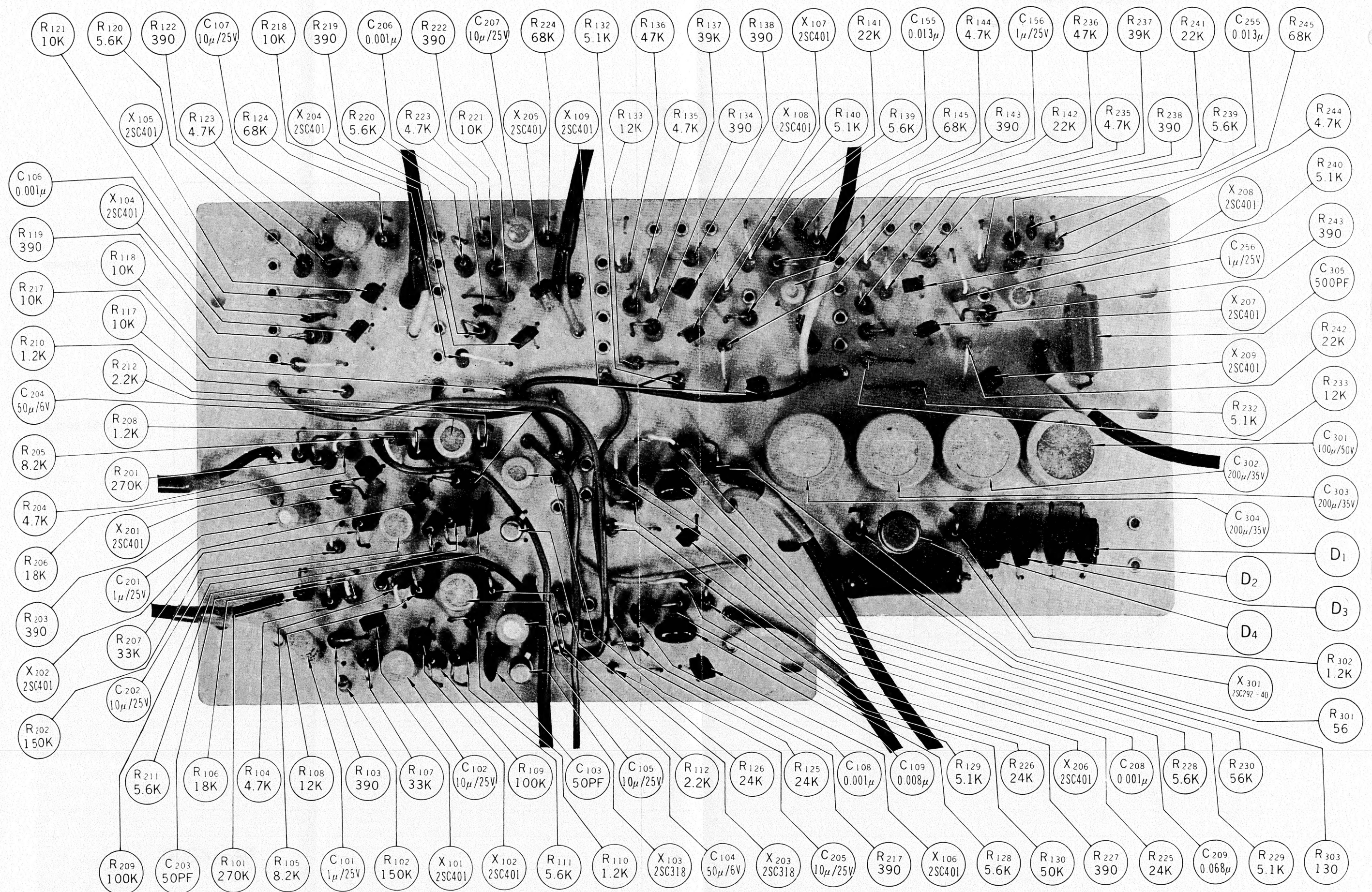
FILTER AMPLIFIER BORD

— Conductor Side —



TA—4300

—Components Side—





SERVICE INFORMATION No. 67-101

Serial No. 1,800 and after

DATE: December, 1967

SUBJECT :

Additional mylar capacitor (0.033 mfd & 0.01 mfd)

REASON :

0.033 mfd ; To improve the frequency response

0.01 mfd ; To eliminate the noise in power diode

DESCRIPTION :

	Part No.	
0.033 mfd $\pm 10\%$ 50V Mylar Capacitor (Same as C114 & 214)	1-105-679	10 pcs.
0.01 mfd $\pm 20\%$ 100V Mylar Capacitor	1-105-873	4 pcs.

0.033 mfd capacitor should be attached across electrolytic capacitor on conductor side of printed circuit board.

SYMBOL No.	C157	C158	C159	C160	C161
ACROSS	C101	C102	C105	C107	C156

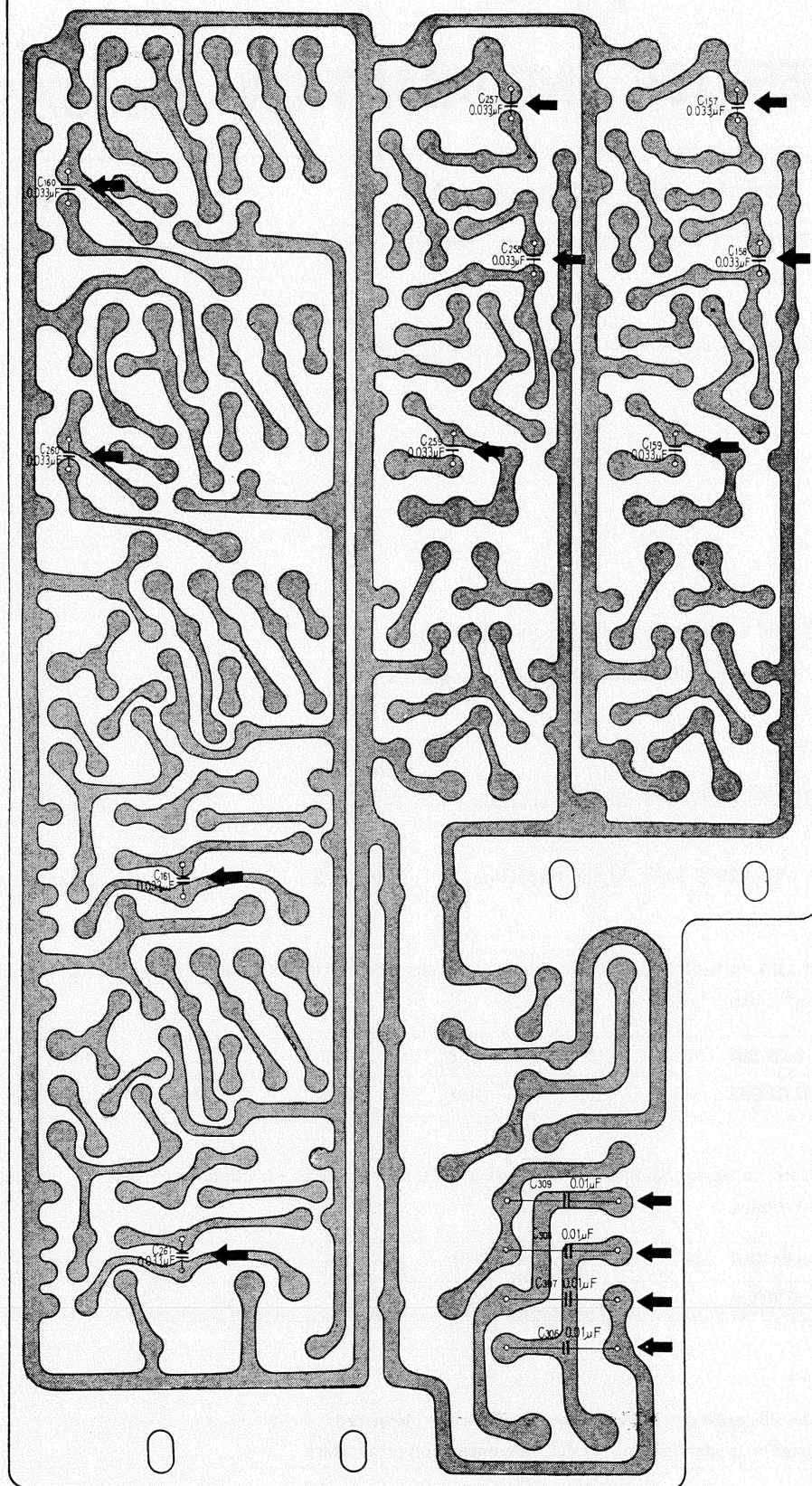
0.01 mfd capacitor should be attached across power diode on conductor side of printed circuit board.

SYMBOL No.	C306	C307	C308	C309
ACROSS	D1	D2	D3	D4

-NOTE-

To simplify the discussions, only channel "1" (left) was described.
Channel "2" (right) is identical except for reference symbol numbers.

SONY TA-4300



SONY CORPORATION

767

SONY CORPORATION

Complete Spare Parts List for TA-4300 E, UL, CSA

March 5, 1969

<u>Part No.</u>	<u>Description</u>	<u>Q'ty</u>	<u>Unit Price</u>
<u>I. Mechanical Parts</u>			
X-20386-01	Front Panel Ass'y -----	1	
2-038-601	Front Panel -----	1	
2-031-955	Shade Pilot Lamp -----	1	
-956	Escutcheon, pilot lamp -----	1	
X-20386-02	Bottom Plate Ass'y -----	1	
2-038-602	Bottom Plate -----	1	
-603	Stud, voltage selector -----	2	
X-20386-03	Carton Ass'y -----	1	
X-20299-04	Knob (A) Ass'y -----	2	
X-20320-03	Knob (B) Ass'y -----	6	
2-038-611	Sub Panel -----	1	
-612	Holder, shaft (A) -----	1	
-613	Holder, shaft (B) -----	2	
-614	Case -----	1	
-615	Plate, jack -----	1	
-616	Felt -----	1	
-617	Label, specification -----	1	
-618	Label, frequency indicating -----	1	
0-051-263	Foot, rubber -----	4	
2-029-930	Screw, case cover -----	4	
-931	Knob -----	1	
3-402-839	Label, serial number -----	1	
3-410-032	Stopper coil; small -----	1	
<u>II. Screws, Washers & Nuts</u>			
7-621-261-23	Screw (+) RF 3ø x 4 -----	2	
-261-33	Screw (+) RF 3ø x 5 -----	14	
-261-48	Screw (+) RF 3ø x 6 -----	5	
-261-53	Screw (+) RF 3ø x 8 -----	6	
-261-65	Screw (+) RF 4ø x 10 -----	4	
-999	Screw, hexagonal head 3ø x 8 -----	6	
7-622-108-02	Nut 3ø -----	22	
7-623-108-02	Washer 3ø -----	19	
-208-01	Washer, spring 3ø -----	43	
-308-01	Washer, star 3ø -----	6	

<u>Part No.</u>	<u>Description</u>	<u>Q'ty</u>
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III. Accessories

2-038-624	Bag, polyethylene -----	1
0-037-241	Bag, earphone -----	1
1-506-105-01)	Plug, phono -01; -----	4
-02)	-02; -----	4
* -138-11)	Plug, phono -11; -----	2
-21)	-21; -----	2
7-491-001-01	Desiccant -----	1
2-029-953	Label, voltage indicating -----	1
3-701-026	Label, tuck -----	1

New Parts Added

3-793-082	Supplement -----	1
3-793-062	Supplement -----	1
3-701-020	Bag, check sheet -----	1

IV. Electrical Parts

Chassis Block

1-441-299	Transformer, power -----	1
1-534-241-14	Cord, AC power -----	1
* -487-21	Cord, power -----	1
1-518-052	Lamp, pilot -----	1
1-517-021	Socket, pilot lamp -----	1
1-509-015	Socket, AC CNP-1 -2 -----	2
1-514-270	Switch, power S5 -----	1
1-101-534	Encapsulated Component, 120Ω+0.1μF 500WV -----	1
1-221-837	Adjustable Resistor, 20kΩ (B)	
	R131,231,146,246,147,247 -----	6
1-507-142	2P Jack, input phono	
	J101,201,103,203,102,202,	
	104,204 -----	4
1-526-165	Socket, voltage selector -----	1
1-513-328	Switch, rotary S1 -----	1
-329	Switch, rotary S2 -----	1

Capacitor, mylar

1-105-679	0.033μF 50V +10% C110,210 -----	2
-677	0.022μF 50V +10% C111,211 -----	2

<u>Part No.</u>	<u>Description</u>	<u>Q'ty</u>
1-105-675	0.015μF 50V <u>+10%</u> C112,212 -----	2
-673	0.01μF 50V <u>+10%</u> C113,213 -----	2
-679	0.033μF 50V <u>+10%</u> C114,214 -----	2
<u>Resistor, composition</u>		
1-201-459	8.2kΩ RC1/2 <u>+10%</u> R113,213 -----	2
-099	18kΩ RC1/2 <u>+10%</u> R114,214 -----	2
-049	33kΩ RC1/2 <u>+10%</u> R115,215 -----	2
-054	47kΩ RC1/2 <u>+10%</u> R116,216 -----	2
<u>Printed Circuit Board</u>		
1-538-556-12	Printed Circuit Board, SB-21905 -----	1
7-240-150-00,	Transistor, 2SC401-5,6 X101,102,201,202,	
7-241-160-00)	104 - 109,	
	204 - 209 -----	16
7-231-232-0)	Transistor, 2SC318- ²³² ₂₄₂) X103,203 -----	2
-242-0)		
7-229-240-0)	Transistor, 2SC292- ⁴⁰ ₃₀) X301 -----	1
-230-0)		
7-193-110-4	Diode, SD-1Z D1 - 4 -----	4
<u>Resistor, composition</u>		
1-202-631	270kΩ <u>+10%</u> RC1/2 R101,201 -----	2
-563	390Ω <u>+10%</u> RC1/2 R103,203,119,219,122,222,	
	127,227,134,234,138,238,	
	143,243 -----	14
-589	4.7kΩ <u>+10%</u> RC1/2 R123,223,135,235,144,244 --	6
-609-31	33kΩ <u>+10%</u> RC1/2 R107,207 -----	2
*1-240-509	33kΩ RD1/8US R107,207 -----	2
1-202-599	12kΩ <u>+10%</u> RC1/2 R108,208 -----	2
-621	100kΩ <u>+10%</u> RC1/2 R109,209 -----	2
-575	1.2kΩ <u>+10%</u> RC1/2 R110,210 -----	2
-591	5.6kΩ <u>+10%</u> RC1/2 R111,211,120,220,128,228,	
	139,239 -----	8
-581	2.2kΩ <u>+10%</u> RC1/2 R112,212,302 -----	3
-617	68kΩ <u>+10%</u> RC1/2 R145,245,124,224 -----	4
-615	56kΩ <u>+10%</u> RC1/2 R130,230 -----	2
-543	56Ω <u>+10%</u> RC1/2 R301 -----	1
<u>Resistor, carbon; fixed</u>		
1-242-695	8.2kΩ <u>+5%</u> RD1/4UR R105,205 -----	2

<u>Part No.</u>	<u>Description</u>	<u>Q'ty</u>
1-242-703	18kΩ +5% RD1/4UR R106,206	2
-725	150kΩ +5% RD1/4UR R102,202	2
*1-244-727	180kΩ RD1/4SR R102,202	2
1-203-069	10kΩ +5% RD1/4UR R117,217,118,218,121,221	6
-700	24kΩ +5% RD1/4UR R125,225,126,226	4
-155	5.1kΩ +5% RD1/4UR R129,229,132,232,140,240	6
-128	12kΩ +5% RD1/4UR R133,233	2
-095-11	47kΩ +5% RD1/4UR R136,236	2
*1-203-934	47kΩ +5% RD1/4 R136,236	2
-178	39kΩ +5% RD1/4UR R137,237	2
-969	22kΩ +5% RD1/4UR R141,241,142,242	4
<u>Capacitor, mylar</u>		
1-105-821	0.001μF 50V +20% C106,206,108,208,155,255	6
<u>Capacitor, mica</u>		
1-109-020	5000pF +20% C305	1
1-107-002	50pF +10% C103,203	2
<u>Capacitor, mylar</u>		
1-105-843	0.068μF 50V +20% C109,209	2
<u>Capacitor, electrolytic</u>		
1-121-179-11	10μF 25WV C101,201,102,202,105,205,107,207	8
*1-121-179	10μF 25WV C102,104,105,202,204,205	6
-261	200μF 35WV C302,303,304	3
-172	100μF 50WV C301	1
-279-11	1μF 25WV C156,256	2
* -279	1μF 25WV C101,201	2
<u>Resistor, wire wound</u>		
1-207-165	130Ω 3W +10% R303	1
1-513-330	Switch, rotary; S3	1
-331	Switch, rotary; S4	1
<u>Capacitor, mylar</u>		
1-108-303	0.085μF 50V +5% C116,216	2
-301	0.048μF 50V +5% C116,216	2
-299	0.027μF 50V +5% C117,217,126,226,146,246, 150,250,154,254	10

<u>Part No.</u>	<u>Description</u>	<u>Q'ty</u>
1-108-300	0.042μF 50V <u>+5%</u> C123,223,143,243,147,247, 151,251 -----	8
-298	0.024μF 50V <u>+5%</u> C124,224,144,244,148,248, 152,252 -----	8
<u>Capacitor, mica</u>		
1-109-093	0.0067μF 50V <u>+5%</u> C121,221 -----	2
-091	0.0026μF 50V <u>+5%</u> C127,227,135,235 -----	4
-089	0.0016μF 50V <u>+5%</u> C128,228,136,236 -----	4
-088	0.0014μF 50V <u>+5%</u> C129,229,137,237 -----	4
-092	0.0048μF 50V <u>+5%</u> C130,230,138,238 -----	4
-087	0.001μF 50V <u>+5%</u> C131,231,139,239 -----	4
-090	0.0019μF 50V <u>+5%</u> C134,234,142,242 -----	4
-085	620pF 400WV <u>+20%</u> C132,232,140,240 -----	4
-086	580pF 400WV <u>+20%</u> C133,233,141,241 -----	4
<u>New Parts Added</u>		
<u>Resistor, composition</u>		
1-240-489	4.7kΩ RD1/8US R104,204 -----	2
<u>Capacitor, mylar</u>		
1-105-839	0.033μF <u>+20%</u> 30WV C157-160, 257-260 -----	8
-913	0.01μF <u>+20%</u> 200WV C306-309 -----	4
1-106-550	0.33μF <u>+20%</u> 35WV C156,256 -----	2
<u>Mounted Circuit Board</u>		
X-20386-55	Filter Amplifier -----	1
<u>Additional Parts List for UL Model</u>		
2-038-625	Label, specification -----	1
2-029-955	Plate, outlet indicate -----	1
3-422-204	Label B, caution -----	1
1-534-526-21	Cord, power -----	1

<u>Part No.</u>	<u>Description</u>	<u>Q'ty</u>
<u>Additional Parts List for CSA Model</u>		
2-029-966	Plate, AC outlet indicate -----	1
-911	Label, caution -----	1
3-793-105	Warranty Station List -----	1
-107	Card, warranty -----	1
1-534-526-21	Cord, power -----	1

*. Parts changed.

Spare Parts List for TA-4300(E)

<u>Part No.</u>	<u>Description</u>	<u>Q'ty</u>	<u>Unit Price</u>
X-20386-01-1	Panel Ass'y -----	1	
2-038-601-01	Panel -----	(1)	\$2.60
2-031-955-01	Cover, pilot lamp -----	(1)	0.02
-956-01	Escutcheon, pilot lamp -----	(1)	0.06
X-20386-02-1	Bottom Cover Ass'y -----	1	0.53
2-038-602-01	Bottom Cover -----	(1)	
-603-01	Shaft, voltage selector -----	(2)	
X-20386-03-1	Carton Ass'y -----	1	0.63
X-20299-04-1	Knob (A) Ass'y -----	2	0.27
X-20320-03-1	Knob (B) Ass'y -----	6	0.24
2-038-611-01	Sub Panel -----	1	0.36
-612-01	Holder, shaft (A) -----	1	0.10
-613-01	" " (B) -----	2	0.05
-614-01	Case -----	1	1.41
-615-01	Plate, jack -----	1	0.85
-616-02	Felt -----	1	0.02
-617-02, -01	Label, specification -----	1	0.05
-618-01	Label, frequency selecting -----	1	0.05
0-051-263-01	Foot, rubber -----	4	0.05
2-029-930-01	Screw, case cover -----	4	0.04
-931-01	Knob, -----	1	0.09
3-402-839-01	Label, serial number -----	1	0.01
3-410-032-01	Stopper, cord; small -----	1	0.02
7-621-261-23	Screw, (-) RF 3/8 x 4 -----	2	0.15/100
-261-33	" " 3/8 x 5 -----	14	0.13/100
-261-48	" " 3/8 x 6 -----	5	0.59/100
-261-53	" " 3/8 x 8 -----	6	0.11/100
-261-65	" " 4/8 x 10 -----	4	0.11/100
-770-26	" (+) B 3/8 x 6 -----	12	0.68/100
-999-01	Hexagonal Head Screw, 3/8 x 8 -----	6	0.81/100
7-622-108-02	Nut 3/8 -----	22	

Part No.	Description	Q'ty	Unit Price
7-623-108-02	Washer 3/6 middle -----	19	\$0.31/100
-208-01	Spring Washer 3/6 -----	43	0.06/100
-308-01	Star Washer 3/6 -----	6	0.19/100
2-038-624-01	Bag, polyethylene -----	1	0.03
0-037-241-01	Bag -----	1	0.02
1-506-105-01	Plug, phono -----	4	0.03
-02)		4	0.03
2-029-953-02	Label, voltage -----	1	0.02
7-491-001-01	Desiccant -----	1	0.03
3-701-026-01	Label, tuck -----	1	0.01

Chassis Block

1-441-299-11	Power Transformer -----	1	2.79
1-534-241-14	AC Power Cord -----	1	0.28
1-518-052-21	Pilot Lamp, SB-20737 -----	1	0.05
1-517-021-11	Pilot Lamp Socket, SB-18653 -----	1	0.05
1-509-015-01	Socket, AC SB-12158 CNP-1 -----	2	0.10
	CNP-2) -----		
1-514-270-11	Power Switch SB-21955 S5 -----	1	1.11
1-101-534-11	Encapsulated Component, 120 ohms +0.1uF 500WV- -----	1	0.17
1-221-837-11	Adjustable Resistor, SB-22027 20K ohms (B) -----	6	0.19
	R131,231,146,246,147,247 ---		
1-507-142-12	2P Jack, input Phono, SB-20721 -----	4	0.07
	J101,201,103,203,102,202, 104,204 -----		
1-526-165-11	Socket, voltage adaptor; special -----	1	0.22
1-513-328-11	Switch, rotary SB-22028 S1 -----	1	0.62
-329-11	" " SB-22029 S2 -----	1	0.62
1-105-679-12	Mylar Capacitor, 0.033uF 50V +10% C110,210 -	2	0.04
-677-12	" , 0.022uF " " C111,211 -	2	0.03
-675-12	" , 0.015uF " " C112,212 -	2	0.03
-673-12	" , 0.01uF " " C113,213 -	2	0.03
-679-12	" , 0.033uF " " C114,214 -	2	0.04
1-201-459-11	Composition Resistor, 8.2K ohms RC1/2 +10% -----	2	0.02
	R113,213 -----		
-099-11	" , 18K ohms RC1/2 +10% R114,214 ----	2	0.02
-049-11	" , 33K " " R115,215 ----	2	0.02
-054-11	" , 47K " " R116,216 ----	2	0.02

Printed Circuit Board

1-538-556-12	Printed Circuit Board SB-21905 -----	1	1.09
240 150	Transistor, 2SC401-5,6 X101,102,201,202,104 -	109	0.14
7-241-160-00			
	204 - 209 -----	16	
232 0	" , 2SC318-232 X103,203 -----	2	0.34
7-231-242-0			

Part No.	Description	Q'ty	Unit Price
1-121-312-11	Electrolytic Capacitor, 50uF 6WV C104,204 ----	2	\$0.04
-261-11	" , 200uF 35WV C302,303,304	3	0.13
-172-11	" , 100uF 50WV C301 ----	1	0.16
-279-11	" , 1uF 25WV C156,256 ---	2	0.04
1-207-165-11	Wire Wound Resistor, SB-18680 130 ohms 3W +10% R303 -----	1	0.09
1-513-330-11	Switch, rotary; SB-22030, S3 -----	1	56.66
-331-11	" , SB-22031, S4 -----	1	3.78
1-108-303-16	MKT. Mylar Capacitor, SB-22033 0.085uF 50V +5% C115,215 -----	2	0.19
-301-16	" , SB-22033 0.048uF 50V +5% C116, 216 --	2	0.15
-299-16	" , " 0.027uF " " C117, 217,126,226,146,246, 150,250,154,254 ----	10	0.15
-302-16	" , " 0.053uF " " C118,218 -----	2	0.15
-297-16	" , " 0.021uF " " C119,219 -----	2	0.15
-295-16	" , " 0.012uF " " C120,220 -----	2	0.10
-296-16	" , " 0.013uF " " C122,222,125,225,145, 245,149,249,153,253-	10	0.10
-300-16	" , " 0.042uF " " C123,223,143,243,147, 247,151,251 -----	8	0.15
-298-16	" , 0.024uF 50V +5% C124,224,144, 244,148,248, 152,252 -----	8	0.15
1-109-093-11	Mica Capacitor, SB-22058 0.0067uF 50V +5% C121,221 -----	2	0.24
-091-11	" , " 0.0026uF " " C127,227,135, 235 -----	4	0.19
-089-11	" , " 0.0016uF " " C128,228,136, 236 -----	4	0.17
-088-11	" , " 0.0014uF " " C129,229,137, 237 -----	4	0.15
-092-11	" , " 0.0048uF " " C130,230,138, 238,-----	4	0.22
-087-11	" , " 0.001uF " " C131,231,139, 239 -----	4	0.15
-090-11	" , " 0.0019uF " " C134,234,142, 242 -----	4	0.17
-085-11	" , " 620PF 400WV +20% C132,232,140, 240 -----	4	0.08
-086-11	" , " 580PF " " C133,233,141, 241 -----	4	0.08